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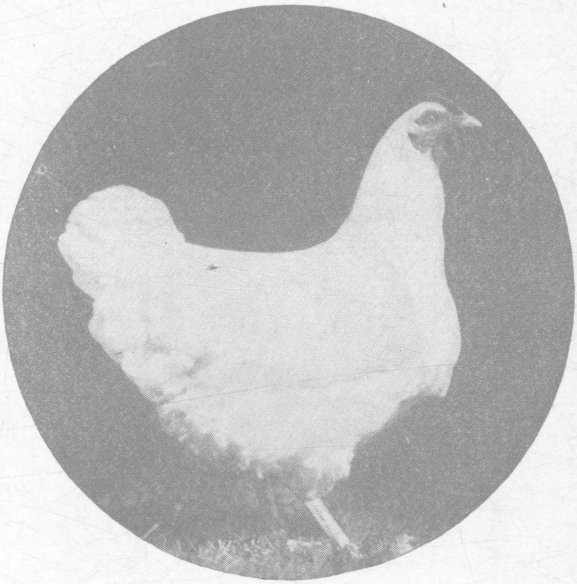

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Culling the Poultry Flock

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Ohio farm flock owners are today vitally interested in the cost of production. The efficiency of the farm hen is one of the controlling factors in the cost of egg production. Records kept by demonstration farms show that the flock which is producing a large number of eggs per hen is producing those eggs at a greater profit than before the war, when feed prices were low. They also show that the farm flock which averages a low production per hen is kept at a greater loss than when feed prices were low.

In most instances the egg production can be increased by proper feeding, and farmers in general are practising better feeding methods. Feed alone, however, will not solve the problem. It is necessary to follow a system of breed improvement by selection which will eliminate the poor egg producer and her offspring, and leave only the high egg producer for the breeding and laying pens.

Culling out the poor hens should be continuous thruout the year. This consists of weeding out any hen that is sick or shows a decided lack of vitality. The whole flock should be gone over carefully and systematically at some one time of the year in order to separate or cull out the hens that have been the poor layers. The time for this thoro culling should come before the pullets are ready for the laying pens. Since it is a process of eliminating the non-layer it will save feed to cull as early as possible. If the flock is gone over in July or August it is well to repeat the culling in September or October. If only one culling is to be done it is better done in August or September.

In culling the flock we have two questions to ask regarding each hen.

1—Is she laying?

2—Has she been a high egg producer?

The answers to these questions are based upon the following:

1—Color changes in the body due to egg production.

2—Body changes in fat and lay bones.

3—Time of molting.

COLOR CHANGES

When a hen is not laying she deposits fat on her body. This fat contains a yellow pigment (in yellow skinned varieties) which gives the yellow color to the legs, beak, skin, etc. As soon as a hen begins to produce eggs, this yellow pigment is diverted from the body and is used in coloring the egg yolk. As long as a hen produces eggs the pigment is all used by the yolk and none of it finds its way to the body. When she stops laying this pigment is again deposited with the body fat.

The pigment deposited in the body during the hen's rest period gradually fades or bleaches out during production, leaving the body color a bluish white or pink. This process of fading follows a certain definite course, always in the following order: First, the vent; second, the eye rings and ear lobes; third, the beak; and lastly, the shanks.

The kind of feed a hen has had affects the period necessary for the color to fade. The yellow pigment is derived from the grain and green feed that the hen eats. The hen that has had yellow corn and plenty of green feed has a larger supply of yellow stored in her body than a hen fed on white corn with no green feed, and the more yellow pigment there is stored the longer the time required for bleaching.

With these facts in mind it is possible to select the hen that has been the continuous, consistent layer, as well as to determine those hens that have just begun to lay or have been very poor layers.

VENT, EYE RING, AND EAR LOBE COLOR

The vent is the first to lose the yellow color after egg production starts. This is due to the fact that those parts of the body where the blood circulation is greatest, fade first. A white or pink vent of a yellow skinned bird indicates she is laying.

The eye rings, which are in the inner edge of the eyelids, bleach out a little more slowly than the vent and therefore, bleached or white eye rings indicate a longer production than a bleached vent.

The ear lobes on the white lobed varieties bleach next and indicate a still longer period of production than a white vent and white eye rings.

BEAK COLOR

The beak loses its color before the shanks do, and a white beak indicates that the hen has been producing eggs for a month or six weeks. The color leaves the beak beginning at the base, and gradually disappearing until it leaves the front part of the upper beak. The lower beak bleaches faster than the upper. The lower beak should be used for observation when the upper is covered with black or horn as in the Rocks and Rhode Island Reds.

SHANK COLOR

The shanks are the last to lose the yellow color, and for this reason are the surest indication of long, continuous production. It takes from four to five months for the shanks to become white after the hen begins producing eggs. The color leaves the front of the shank first and gradually fades from the scales on the back as the length of the laying period increases.

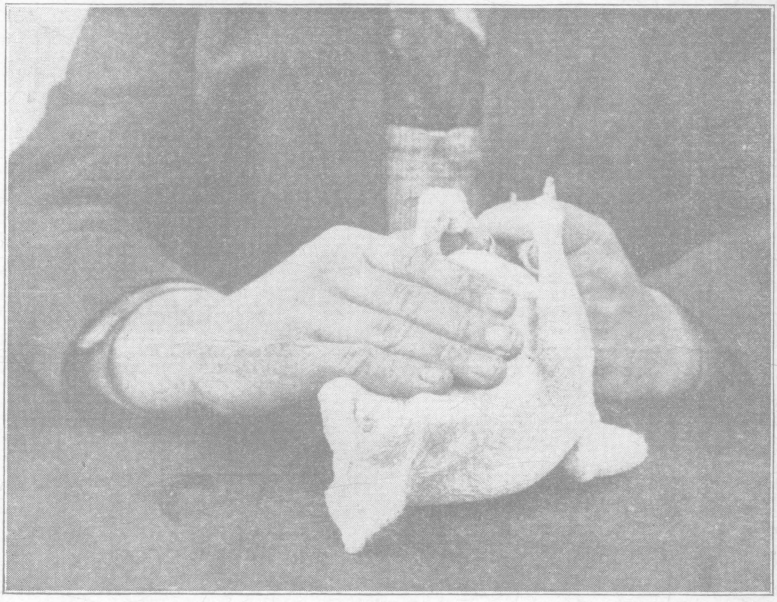

Fig. 1—Measuring the span between pelvic bones and keel. The span or distance between pelvic bones and keel is one way of determining abdominal capacity with which productiveness is closely associated.

BODY CHANGES

VENT

The vent of a laying hen is large, open, moist, and soft, while the vent of a non-laying hen is small, closed, dry and puckered.

COMB

The comb of a laying hen is large, full, and bright in color, while the comb of a non-laying hen is dry and hard, often covered with scale, and is pale in color.

ABDOMEN

The fat covering of the body cavity in a laying hen is soft and pliable. It feels very much like a cow's udder that has been partly milked. The skin is soft and velvety. The abdomen of the non-laying hen is dry and hard.

PELVIC BONES

The pelvic or pin bones of a laying hen are straight and flexible, with very little or no fat around them. They are spread apart far enough to

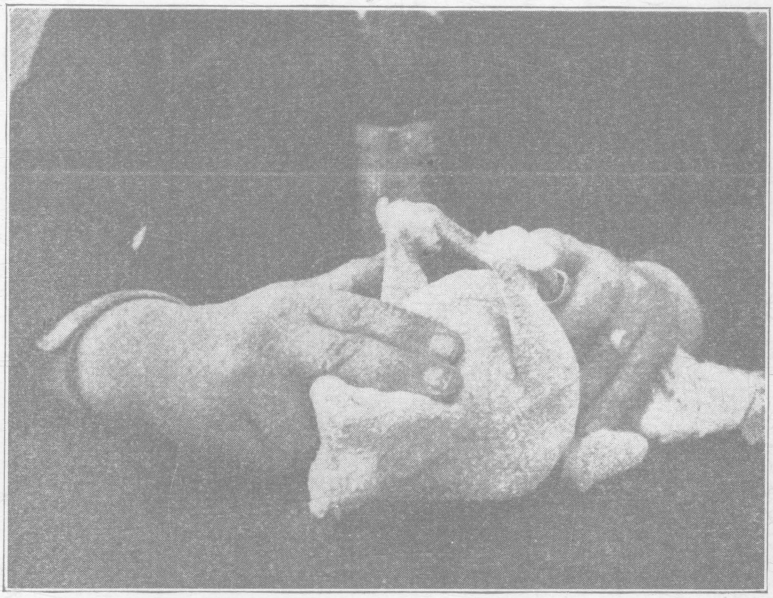

Fig. 2—The poor layer has a narrow span between pelvic bones and keel. A two finger span is a pretty sure indication of a poor layer.

permit the passage of the egg. The spread varies with the individual and the breed, and no definite measurement can be given. In general, however, a laying hen will show a spread between the pin bones of at least three fingers. Practice is necessary to determine just what spread indicates that the hen is laying. Keep in mind the fact that a hen that is laying will show a greater spread of pin bones than one not laying, and that the bones of a non-laying hen are thick, stiff, and blunt, with the ends bent in.

DISTANCE FROM PELVIC BONES TO KEEL BONES

A laying hen consumes more feed than one that is not laying. A high egg producer consumes more feed than a poor egg producer. In

order to consume and digest this feed the intestines of a laying hen are larger than a hen not laying. When laying, the ovary and oviduct are greatly enlarged and require more room. To provide this extra room, the body increases in capacity or in depth. This is noticeable by the increase in the distance from the pin bones to the end of the keel bone.

The increase in size of the body cavity is secured by the dropping down of the keel bone. By measuring the distance from the pin bones to the keel bone an idea can be formed as to whether the hen is in laying condi-

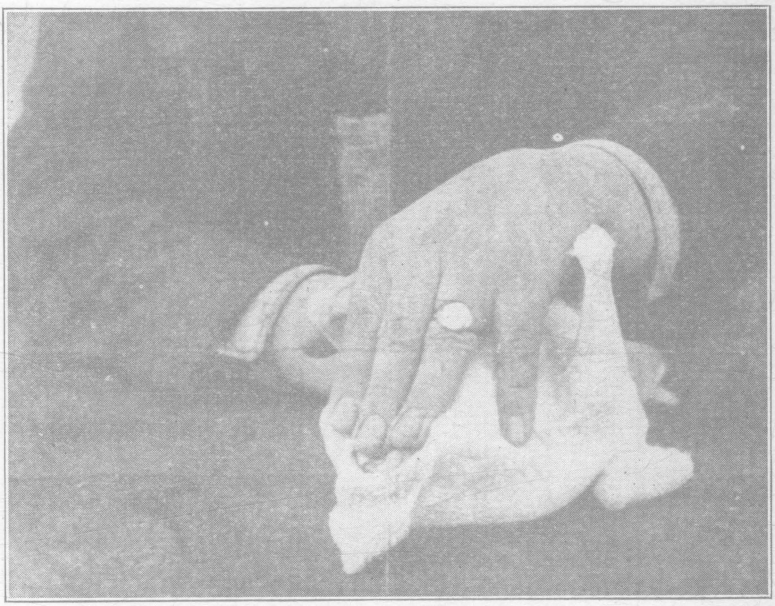

Fig. 3—Measuring the distance between the pelvic bones. This "three finger" fowl should prove to be an excellent layer if she responds equally well to other tests. The best layers usually show widespread pelvic bones.

tion or not. No definite measurement can be given that will fit all individual hens. As a general rule, a hen that measures less than three fingers body depth (see Figs. 1 and 2) is not laying, or is a poor layer, because such a hen lacks the capacity for handling a large amount of feed. The hen that shows the greater body depth is to be chosen as a good layer if she shows the other marks of egg production.

THE MOLT

Most hens stop laying when they begin to molt. Since the molting period covers several weeks it is advisable to sell the hens that

molt early. It is a fact, no longer disputed, that a hen, in order to make a high yearly record, must be a consistent layer. The early molting hen is not a consistent layer. She takes all the fall months as a vacation for changing her plumage. The consistent layer molts late and grows her new plumage rapidly.

The time of the molt is the best indication of the last year's performance. This can be used in culling all breeds and varieties, but is of special

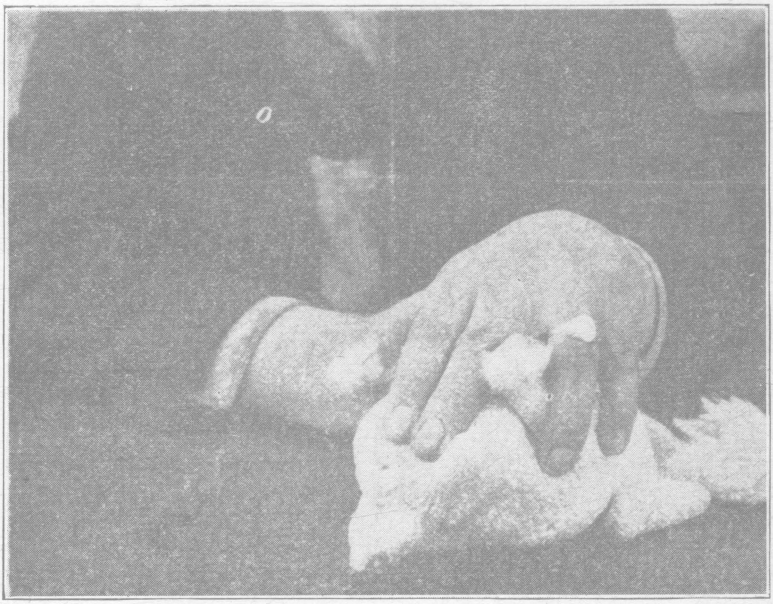

Fig. 4—The non-laying hen has little room between the pelvic bones. This two finger hen shows the contracted space usually found in a hen that is not laying.

importance with such breeds as the Orpingtons and Minorcas that do not have the yellow skin.

The hens that molt early, under normal conditions, will not lay as many winter eggs as the hen that molts late. Neither will she begin egg production earlier in the spring. No definite date can be set as to early molting. As a general rule, however, the first hens in the flock to molt should be sold, and the last to molt should be kept for breeding purposes.

Hens may be thrown into an early molt by starving while laying heavily; by irregular feeding; by roosting in a house that is poorly ventilated, or in any way that tends suddenly to check egg production. This should be avoided, as it is very likely to result in a lower total egg production. If the pullets are hatched early they will be laying early in the fall and thus the egg production kept up at all seasons.

SUMMARY

CULL OUT THE POOREST

Cull in July, August, and September the hens that show:

A. Well developed molting with distinctly contracted comb and wattles.

B. Dry, contracted abdomen, with a dry, wrinkled, puckered vent.

C. Yellow shanks and beak.

Test A will usually be sufficient, but it should be combined with B and C for greater accuracy. Test C is merely an indication of *past* performance and should be combined with test A for accuracy.

SELECT THE BEST

If the poultryman wishes to cull everything but the very best the selection should be repeated in October or November, using the following tests.

Keep those hens showing:

1. Incomplete molt, red comb, bright eye.
2. Well spread pelvic bones, good depth from pelvic bones to keel bone, and a soft, pliable abdomen.
3. Pale, faded shanks and beak, white vent, eye rings, and ear lobes.

To make the selection with greatest accuracy use all these tests.